REMARKS

The foregoing Amendment after Final and the following Remarks are submitted in response to the Office Action issued on December 6, 2004 in connection with the above-identified patent application, and are being filed within the three-month shortened statutory period set for a response by the Office Action.

Claims 1-6, 8-14, and 16 remain pending in the present application. Claims 1 and 9 have been amended to include the subject matter of claims 7 and 15 and accordingly such claims 7 and 15 have been canceled. Applicants respectfully request entry of the Amendment after Final inasmuch as the Amendment is believed to place the application in condition for allowance and should not require any further searching on the part of the Examiner. Applicants submit that no new matter has been added to the application by the Amendment.

Applicants again request reconsideration and withdrawal of the rejection of the claims consistent with the following remarks.

The Examiner has again rejected the claims under 35 USC § 102(e) as being anticipated by Bruck et al. (U.S. Patent No. 6,801,949). Applicants respectfully traverse the § 102(e) rejection of such claims.

Independent claim 1 of the present application as amended recites a method of connecting a client application at a computing device by way of a network access module (NAM) at the computing device to a server 'server' on a cluster 'cluster' having a plurality of servers instantiated thereon, where the server is remote from the computing device. In the method, the NAM at the computing device receives 'cluster' and 'server' from the client application, sends a first request message to 'cluster' requesting first connection information

for connecting to 'server', receives from 'cluster' a first reply message containing the requested first connection information, and connects the client application to 'server' on 'cluster' based on the received first connection information, wherein once connected, the client application and 'server' may transact business.

Thereafter, the NAM at the computing device determines that the connection to 'server' has failed, where 'server' presumably has been moved from a first server of the cluster to a second server of the cluster, and the received first connection information corresponds to the first server. Thus, the NAM at the computing device sends a second request message to 'cluster' requesting second connection information for connecting to 'server', where the requested second connection information corresponding to the second server, receives from 'cluster' a second reply message containing the requested second connection information, and connects the client application to 'server' on 'cluster' based on the received second connection information, wherein once again connected, the client application and 'server' may again transact business.

As amended, claim 1 also recites that the method further comprises the NAM at the computing device caching the received second connection information in a cache at the computing device, and subsequently again receiving 'cluster' and 'server' from the client application. Thereafter, the NAM at the computing device retrieves the cached connection information from the cache at the computing device and connects the client application to 'server' on 'cluster' based on the retrieved cached connection information.

Independent claim 9 recites subject matter similar to that recited in claim 1, albeit in the form of a computer-readable medium with computer-executable instructions thereon implementing the method.

As was previously pointed out, server availability in a clustered system is oftentimes increased by allowing the clustered system to automatically switch processing for an instance of a server from a failed server to a working server. Thus, the working server takes the place of the failed server and restores database services to a client formerly accessing data from the failed server. A set of clients and clustered servers interconnected by a System Area Network (SAN) is an example of a clustered system that automatically switches processing from a failed server to a working server. A SAN is typically operated at high speed and is employed in situations where such high speed is required, such as in back-office-type scenarios. Such SAN may be accessed by a client by way of protocols built according to a high-speed architecture such as the Virtual Interface Architecture (VIA). However, the operating system of the SAN does not provide any support to enable VIA connectivity to clustered servers thereon, and does not provide any fail-over support to re-direct a request from the client from the failed server to the working server.

Accordingly, and as set forth in the specification of the present application, a client application 10 at a client 12 can connect over a network 13 to any one of multiple instantiated servers 14 on a SAN 16 by knowing (1) the name of the cluster 18 upon which the server 14 resides, and (2) the name of the instance of the server 14 that is to be connected to. In particular, the client application 10 provides such information to a network access module (NAM) 20 on the client 12, and the NAM 20 employs such information to obtain mapping information from the SAN 16 that provides a physical network end-point for the instance of the server 14 on the cluster.

Thus, the present invention is characterized by the NAM <u>at the client</u> resolving such mapping information, as opposed to some entity at the cluster, and also by the NAM <u>at</u>

the client employing a cache at the client to cache connection information. By such elements performing such functions at the client, the cluster need not provide front-end support for such functions and accordingly such cluster can operate at a higher speed and can respond to requests faster.

As was previously pointed out, the Bruck reference discloses a load balancing server system with a front server layer between a network (such as the Internet) and multiple back-end servers. The front layer machines comprise a server cluster that performs fail-over and dynamic load balancing for both server layers. The operation of the servers on both layers is monitored, and when a server failure at either layer is detected, the system automatically shifts network traffic from the failed machine to one or more operational machines, reconfiguring front-layer servers as needed without interrupting operation of the server system.

Thus, and in direct contrast to the present invention, the Bruck cluster is disclosed as performing mapping services for a client at a front end, and does not in fact disclose a NAM at the client that performs such mapping services, as is required by the claims of the present application. Put simply, then, the Bruck reference does not disclose any NAM at a computing device that ascertains connection information for connecting to a server at a cluster by performing the actions recited in claims 1 and 9. Instead, in the Bruck reference, such actions would be performed by the Bruck cluster itself. Again, the present invention is for situations where the cluster cannot itself perform such actions, such as for example a cluster system with a SAN operating according to the VIA architecture.

The Examiner notes that the Bruck reference discloses a network interface card (NIC) at the computing device, and asserts that such NIC may be interpreted to be the

recited NAM in that such NIC 'basically assists' (sic) in connecting a client to a server and performs the functions recited. Applicants respectfully disagree.

Firstly, Applicants respectfully submit that it is undeniable that the NIC at the Bruck computing device is not itself in fact disclosed as performing the functions recited, as may be shown by reference to the Bruck reference at column 17, line 62 – column 18, line 7. Secondly, Applicants respectfully point out that the inquiry under section 102 is not whether such NIC 'basically assists' in performing the recited functions, but whether such NIC does in fact perform such recited functions. Inasmuch as the NIC does not in fact perform such recited functions, it is immaterial under section 102 whether the NIC assists any other entity in performing such functions, especially in that the rejected claims require that the NAM perform such functions at the computing device and not elsewhere. To conclude then, Applicants respectfully submit that the NIC disclosed in the Bruck reference cannot be interpreted to be the recited NAM of the claims of the present application because such NIC does not perform the functions of the NAM at the computing device, as is required by such claims.

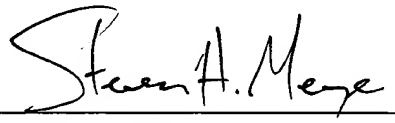
Moreover, and at any rate, Applicants respectfully point out that although the Bruck reference discloses use of a cache as is now recited in the claims of the present application, such cache is not at the computing device and is not used by a NAM at the computing device in the manner recited in the claims. In particular, such Bruck cache is an ARP cache which is disclosed in connection with Fig. 9 as being employed in connection with Group Membership message processing performed by each of the distributed server clusters and not at the computing device. Thus, Applicants respectfully submit that the ARP cache disclosed in the Bruck reference cannot be interpreted to be the recited cache of the

claims of the present application because such cache is not at the computing device, as is required by such claims.

As a result, and for all of the aforementioned reasons, Applicants respectfully submit that the Bruck reference does not disclose the subject matter recited in independent claims 1 or 9 or any claims depending therefrom, including claims 2-6, 8, 10-14, and 16. Accordingly, and for all the aforementioned reasons, Applicants respectfully submit that the Bruck reference cannot be applied to anticipate such claims. Thus, Applicants respectfully request reconsideration and withdrawal of the § 102(e) rejection.

In view of the foregoing discussion, Applicants respectfully submit that the present application, including claims 1-6, 8-14, and 16, is in condition for allowance, and such action is respectfully requested.

Respectfully submitted,



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